

41. (New) The method according to Claim 39, wherein said intervertebral disc cells are minced to obtain an explant prior to culturing.

42. (New) The method according to Claim 39, wherein said cultured human intervertebral disc tissue is combined with a carrier material.

43. (New) The method according to Claim 42, wherein said carrier material is selected from the group consisting of alginate, agarose, collagen, collagen derivatives and mixtures thereof.

44. (New) The method according to Claim 41, wherein said explant is cultured in the presence of serum, growth factors or cytokines.

45. (New) The method according to Claim 41, wherein said explant is cultured in the presence of transforming growth factor beta (TGF- β).

46. (New) The method according to Claim 39, wherein said implanting step comprises:

debriding diseased or injured disc tissue in said patient; and
then delivering said cultured human intervertebral disc cells into the area of
debridement.

47. (New) The method of Claim 41, further including the steps of:

(a) culturing said explant under conditions to propagate a monolayer of human intervertebral disc tissue, wherein said disc tissue can be isolated and further propagated upon passaging;

(b) isolating said human intervertebral disc tissue from said monolayer;

(c) distributing said isolated disc tissue in a carrier material such that said isolated disc tissue forms a three-dimensional structure; and

(d) culturing said distributed tissue in said three-dimensional structure.

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48. (New) The method according to Claim 47, wherein said live intervertebral disc cells are obtained from said human patient to be treated.

49. (New) The method according to Claim 47, wherein said cultured human intervertebral disc tissue is combined with a carrier material.

50. (New) The method according to Claim 49, wherein said carrier material is selected from the group consisting of alginate, agarose, collagen, collagen derivatives and mixtures thereof.

51. (New) The method according to Claim 47, wherein said explant is cultured in the presence of serum, growth factors or cytokines.

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42. (New) A method of preparing cultured intervertebral disc tissue, comprising the steps of:
obtaining live intervertebral disc cells;
culturing said intervertebral disc cells under conditions to propagate disc tissue ;
and
keeping said cultured disc tissue viable until use.

53. (New) A cultured disc tissue for use in treating human disc diseases or injuries prepared according to the steps of:
obtaining live intervertebral disc cells;
culturing said live intervertebral disc cells under conditions to propagate disc tissue; and
keeping said cultured disc tissue viable until use.

54. (New) The cultured disc tissue according to Claim 53, wherein said live intervertebral disc cells are minced to obtain an explant prior to culturing.

55. (New) The cultured disc tissue according to Claim 53, wherein said tissue is cultured in the presence of serum, growth factors or cytokines.

56. (New) The cultured disc tissue according to Claim 53, wherein said tissue is cultured in the presence of transforming growth factor beta (TGF- β).

57. (New) The cultured disc tissue according to Claim 53, wherein said tissue is combined with a carrier material.

58. (New) The cultured disc tissue according to Claim 54, wherein said carrier material is selected from the group consisting of alginate, agarose, collagen, and derivatives and mixtures thereof.